

**Certification Body:**



SAI Global Certification  
Services Pty Limited  
(ACN 108 716 669) Trading  
as "SAI Global"  
JAS-ANZ Accreditation No.  
Z1440295AS  
Address: 680 George St,  
Sydney, NSW 2000  
Website:  
[www.saiglobal.com](http://www.saiglobal.com)



**Certificate Holder:**

Kingspan Insulation Pty Ltd  
25 Oherns Road, Somerton  
VIC 3062  
Tel: 1300 247 235 Fax:  
1300 247 329  
[info@kingspaninsulation.com.au](mailto:info@kingspaninsulation.com.au)

SAI Global Certification Services



Calin Moldovean  
President, Business Assurance  
SAI Global Assurance



Harley Parkes – Unrestricted Building Certifier

**Certificate number: CM20001**

**THIS TO CERTIFY THAT**

**AIR-CELL Glareshield® & AIR-CELL Retroshield®**

**Type and/or use of product:**

*Kingspan AIR-CELL Glareshield® & Kingspan AIR-CELL Retroshield®* are pliable building membrane for the provision of thermal insulation in walls, floors and roofs

**Description of product:**

*Kingspan AIR-CELL Glareshield®* is a Thermo-reflective insulation blanket comprised of an encapsulated air cell structure between a layer of reflective aluminium foil and an anti-glare foil.

*Kingspan AIR-CELL Retroshield®* is a thermo-reflective insulation blanket comprised of an encapsulated air cell structure between two layers of reflective aluminium foil.

**COMPLIES WITH THE FOLLOWING BCA PROVISIONS AND STATE OR TERRITORY VARIATION(S)**

**BCA 2022**

|                                         | Volume One                                                                                                                                                                                                                                                                    | Volume Two                                                                                                                                                                                                                                                               |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Performance Requirement(s)</b>       | <b>F3P1</b>                                                                                                                                                                                                                                                                   | <b>H2P2</b>                                                                                                                                                                                                                                                              |
|                                         | <b>Roof and Wall Cladding</b> – Weatherproofing (must be used in conjunction with other building elements)                                                                                                                                                                    | <b>Damp &amp; Weatherproofing</b> – Weatherproofing (must be used in conjunction with other building elements)                                                                                                                                                           |
| <b>Deemed-to-Satisfy Provision(s):</b>  | <b>C2D11</b><br>including S7C7                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                          |
|                                         | <b>Fire resistance and Stability</b> – Fire hazard properties Other materials                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                          |
|                                         | <b>J4D3</b>                                                                                                                                                                                                                                                                   | <b>13.2.2</b>                                                                                                                                                                                                                                                            |
|                                         | <b>Building fabric</b> - Thermal construction — general (must be used in conjunction with other building elements to achieve a total R value outlined in clause J4D4 'Roof and Ceiling Construction' and J4D6 'Walls and Glazing') subject to state and territory variations. | <b>Building fabric</b> - Building fabric thermal insulation. (must be used in conjunction with other building elements to achieve a total R value outlined in clause 13.2.3 'Roofs and ceilings' and 13.2.5 'External walls') subject to state and territory variations. |
| <b>State or territory variation(s):</b> | <b>NSW C2D11</b><br>including NSW S7C7                                                                                                                                                                                                                                        | <b>NT Part 13.2</b>                                                                                                                                                                                                                                                      |
|                                         | <b>Fire resistance and Stability</b> – Fire hazard properties Other materials                                                                                                                                                                                                 | <b>Building fabric</b> – In the Northern Territory, Part 13.2 is replaced with NT Part 13.2.                                                                                                                                                                             |
|                                         |                                                                                                                                                                                                                                                                               | <b>TAS Part 13.2</b>                                                                                                                                                                                                                                                     |
|                                         |                                                                                                                                                                                                                                                                               | <b>Building fabric</b> – In the Tasmania, Section 13 is replaced with BCA 2019 Part 3.12.                                                                                                                                                                                |

**Date of issue: 27/11/2023**

**Date of expiry: 26/11/2026**



# Certificate of Conformity

**NSW J4D3**

**Building fabric** – Thermal Construction – general

**NT Part J4**

**Building fabric** - For a Class 2 building and Class 4 part of a building, Section J is replaced with Section J of BCA 2009. For Class 3 and Class 5-9 buildings, Section J of NCC 2022 does not apply and from 1 October 2023 Section J of NCC 2019 applies.

**TAS section J**

**Energy efficiency** – This part is deleted from the BCA in Tasmania. In Tasmania, for class 2 buildings and class 4 part of a building, section J is replaced with section J of BCA 2019 amdt. 1.

**NSW Part 13.2.3**

**Building fabric** – In NSW delete 13.2.3 and insert NSW Part 13.2.3 'Roof and Ceilings'.

**NSW Part 13.2.5**

**Building fabric** – In NSW delete 13.2.5 and insert NSW Part 13.2.5 'External walls'.

## SUBJECT TO THE FOLLOWING LIMITATIONS AND CONDITIONS AND THE PRODUCT TECHNICAL DATA IN APPENDIX A AND EVALUATION STATEMENTS IN APPENDIX B

### Limitations and conditions:

1. The Product must be installed in accordance with the following:
  - a. 'AIR-CELL Glareshield® *Thermo Reflective Anti-Glare Insulation*' manual (KIAU0043, Issue 9, April 2020)
  - b. 'AIR-CELL Retroschild® *Thermo Reflective Insulation*' manual (KIAU0045, Issue 7, April 2020)
2. Each product must be used for its intended purpose

### Building classification/s:

Volume 1 – Class 2 to Class 9 buildings  
Volume 2 – Class 1 and Class 10a buildings

**Scope of certification:** The CodeMark Scheme is a building product certification scheme. The rules of the Scheme are available at the ABCB website [www.abcb.gov.au](http://www.abcb.gov.au). This Certificate of Conformity is to confirm that the relevant requirements of the Building Code of Australia (BCA) as claimed against have been met. The responsibility for the product performance and its fitness for the intended use remain with the certificate holder. The certification is not transferrable to a manufacturer not listed on Appendix A of this certificate.

**Disclaimer:** The Scheme Owner, Scheme Administrator and Scheme Accreditation Body do not make any representations, warranties or guarantees, and accept no legal liability whatsoever arising from or connected to, the accuracy, reliability, currency or completeness of any material contained within this certificate; and the Scheme Owner, Scheme Administrator and Scheme Accreditation Body disclaim to the extent permitted by law, all liability (including negligence) for claims of losses, expenses, damages and costs arising as a result of the use of the product(s) referred to in this certificate.

## APPENDIX A – PRODUCT TECHNICAL DATA

### A1 Type and intended use of product

Refer to Page 1 of this certificate.

### A2 Description of product

Refer to Page 1 of this certificate.

### A3 Product specification

- 'AIR-CELL Glareshield® Thermo Reflective Anti-Glare Insulation' manual (KIAU0043, Issue 9, April 2020)
- 'AIR-CELL Retroshield® Thermo Reflective Insulation' manual (KIAU0045, Issue 7, April 2020)

| Product Name & Code                         | AIR-CELL Glareshield®                                    | AIR-CELL Retroshield®                                    |
|---------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|
| Nominal Product Thickness                   | 7.0mm                                                    | 7.0mm                                                    |
| Product Dimensions (Roll Size)              | 1350.0 mm x 22.25 m (30 m <sup>2</sup> )                 | 1350.0 mm x 22.25 m (30 m <sup>2</sup> )                 |
| Declared Material R-value                   | R0.14 m <sup>2</sup> .K/W at 23°C                        | R0.14 m <sup>2</sup> .K/W at 23°C                        |
| Emittance                                   | E0.03 – Reflective Face<br>E0.05 – Anti Glare Face       | E0.03 – Reflective Face                                  |
| Vapour Control (ASTM E96)                   | Vapour Barrier – Class 2                                 | Vapour Barrier – Class 2                                 |
| Electrical Conductivity (AS/NZS 200.1:2017) | Resistance $\leq$ 10M $\Omega$ – Electrically Conductive | Resistance $\leq$ 10M $\Omega$ – Electrically Conductive |

For the purposes of the NCC 2022 Building Code of Australia Volume One, S7C7, the AIR-CELL Glareshield® has been tested to AS 1530.2 and achieved a *Flammability Index of 1* & the AIR-CELL Retroshield® has been tested to AS 1530.2 and achieved a *Flammability Index of 4*.

### A4 Manufacturer and manufacturing plant(s)

Manufacturer - Kingspan Insulation Pty Ltd, 25 Oherns Road, Somerton VIC 3062

Manufactured in Carrum Downs , VIC, Australia

### A5 Installation requirements

Refer to Page 2 of this certificate and the following;

- 'AIR-CELL Glareshield® Thermo Reflective Anti-Glare Insulation' manual (KIAU0043, Issue 9, April 2020)
- 'AIR-CELL Retroshield® Thermo Reflective Insulation' manual (KIAU0045, Issue 7, April 2020)

### A6 Other relevant technical data

- None

## APPENDIX B – EVALUATION STATEMENTS

### B1 Evaluation methods

The system has been assessed as complying with the identified Performance Requirements of the BCA 2022. This involved a review of product specifications, test reports, installation manuals, and associated documentation.

1. Damp and Weatherproofing Assessment:
  - a) A2G2(2)(a) / A5G3(1)(d) - A report issued by an Accredited Testing Laboratory – ‘AWTA’ Australian Wool Testing Authority (NATA accreditation No. 985)
  - b) A2G2(2)(a) / A5G3(1)(e) – A report from an appropriately qualified person – ‘AWTA’ Australian Wool Testing Authority
2. Fire Hazard Properties assessment:
  - a) A2G3(2)(a) / A5G3(1)(d) - A report issued by an Accredited Testing Laboratory - ‘AWTA’ Australian Wool Testing Authority (NATA accreditation No. 1356)
3. Energy Efficiency Assessment:
  - a) A2G3(2)(a) / A5G3(1)(d) - A report issued by an Accredited Testing Laboratory – ‘AWTA’ Australian Wool Testing Authority (NATA accreditation No. 1356) & OTM Solutions Pte. Ltd. (SAC accreditation no. LA-2016-0610-G)
  - b) A2G3(2)(a) / A5G3(1)(f) - Another form of documentary evidence, such as but not limited to a Product Technical Statement - Kingspan Insulation Pty Ltd

### B2 Reports

| Evaluation methods                  | Related Reports - Glareshield |
|-------------------------------------|-------------------------------|
| Damp and Weatherproofing Assessment | 1, 3, 4, 5, 6, 7              |
| Fire Hazard Properties assessment   | 8                             |
| Energy Efficiency Assessment        | 10, 11, 13                    |

  

| Evaluation methods                  | Related Reports - Retroshield |
|-------------------------------------|-------------------------------|
| Damp and Weatherproofing Assessment | 2, 3, 4, 5, 6, 7              |
| Fire Hazard Properties assessment   | 9                             |
| Energy Efficiency Assessment        | 10, 11, 12                    |

1. **AWTA Product Testing, Determination of California Bearing Ratio (CBR) Plunger Method, Test No. 15-006184 (dated 11 January 2016).** This report provides the results to testing of Glareshield to AS3706.4-2012 and returns a result for a mean burst strength of 2.9kN.
2. **AWTA Product Testing, Determination of California Bearing Ratio (CBR) Plunger Method, Test No. 17-003897 (dated 27 July 2017).** This report provides the results to testing of Retroshield to AS3706.4-2012 and returns a result for a mean burst strength of 2.6kN.

# Certificate of Conformity

3. **AWTA Product Testing, Edge Tearing Resistance of Building Membranes and Underlays, Test No. 20-002493 (dated 28 May 2020).** *This report provides the results to testing of Glareshield & Retroshield to AS/NZS 4200.1-2017 Clause 5.3.2.3 and returns the mean result of 934N in the machine direction and 863N in the lateral direction, with a classification of Extra Heavy.*
4. **AWTA Product Testing, Resistance to Dry Delamination, Test No. 20-002497 (dated 29 May 2020).** *This report provides the results to testing of Glareshield & Retroshield to AS/NZS 4201.1-1994 to demonstrate compliance with AS/NZS 4200.1-2017 Clause 5.2.1.1, and determines that the product complies.*
5. **AWTA Product Testing, Pliable Building Membranes and Underlays – Shrinkage, Test No. 20-002496 (dated 17 June 2020).** *This report provides the results to testing of Glareshield and Retroshield to AS/NZS 4201.3-1994 to demonstrate compliance with AS/NZS 4200.1-2017 Clause 5.2.2, and determines that the product complies.*
6. **AWTA Product Testing, Pliable Building Membranes and Underlays – Resistance to Water Penetration, Test No. 20-002495 (dated 16 June 2020).** *This report provides the results to testing of Glareshield & Retroshield to AS/NZS 4201.4-1994 to demonstrate compliance with AS/NZS 4200.1-2017 Clause 5.3.5, and determines the product achieve a Water Control Classification of “water barrier”*
7. **AWTA Product Testing, Water Vapour Transmission – Water Method, Test No. 20-002492 (dated 15 June 2020).** *This report provides the results to testing of Glareshield & Retroshield to ASTM E96-2016 and returns a result for mean permeance of 0.006 µg/N.s (Class 2 VCM).*
8. **AWTA Product Testing, Methods for Fire Tests on Building Materials, Components and Structures, Test No. 23-002785 (dated 07 August 2023).** *This report provides the results of testing of Glareshield to AS 1530.2-1993 and specifies the product obtained a Flammability Index of 1.*
9. **AWTA Product Testing, Methods for Fire Tests on Building Materials, Components and Structures, Test No. 23-002735 (dated 25 July 2023).** *This report provides the results of testing of Retroshield to AS 1530.2-1993 and specifies the product obtained a Flammability Index of 4.*
10. **Kingspan Thermal Value Summary Report – Kingspan Glareshield and Retroshield (Dated 02 August 2023).** *This report provides a Thermal value summary Report in conformance with AS/NZS 4859.1:2018 clause 2.3.3.9, based on test reports provided by AWTA Product Testing for Glareshield & Retroshield (NATA accreditation No. 1356) – (Test Numbers 7-560924-NW, 7-566216-NW, 20-002410, 20-002411) & test reports provided by R&D Services for Glareshield & Retroshield (IAS Accreditation No. TL-566) - (Test Numbers RD18839, RD12585, RD16002, RD20630).*
11. **AWTA Product Testing, Resistance to Surface Corrosion and Wet Delamination at Elevated Ambient Temperatures (Reflective Insulations), Test No. 20-002490 (dated 26 June 2020).** *This report provides the results of testing to AS/NZS 4859.1-2018 and indicates a “PASS” for Wet Delamination and a “PASS” for Surface Corrosion (Glareshield & Retroshield).*
12. **OTM, Material Surface Emittance Test Report, Report No: OTM2111003 (dated 05 Nov 2021).** *This report provides the results to testing of Glareshield to ASTM C1371-15 and returns the result for emittance (Anti-glare) = 0.05*
13. **OTM, Material Surface Emittance Test Report, Report No: OTM2111004 (dated 05 Nov 2021).** *This report provides the results to testing of Glareshield & Retroshield to ASTM C1371-15 and returns the result for emittance (Silver) = 0.02*